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**PRELIMINARY ANNOUNCEMENT CONCERNING  
INSTRUCTION IN PRACTICAL AGRICULTURE UPON  
THE UNIVERSITY FARM**

**DAVISVILLE, CALIFORNIA**

BY

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The University Farm, the selection and purchase of which was provided for by an act of the California Legislature of 1905, consists of about 780 acres of first-class valley land contiguous to the town of Davisville, in Yolo County. The farm is upon the irrigation system of the Yolo Consolidated Water Company and water rights covering the whole acreage accrued to the University by donation from the citizens of the vicinity. The farm is very eligibly situated at the junction of the Oregon and Central overland railway routes, at a distance of thirteen miles from the city of Sacramento.

**CHARACTER OF INSTRUCTION ON THE UNIVERSITY FARM.**

The purposes of the University Farm and the duties of the Regents of the University in connection therewith are defined by the statute (Chapter CXXIX) as follows:

“They (the Regents of the University) shall appoint the necessary instructors and inaugurate and provide for the conduct of instruction in agriculture, and in such other branches of learning as are allied thereto, and as are calculated to better qualify and inform the students attending in the theory and practice of agriculture. This instruction shall be conducted in connection with, and as a part of, the College of Agriculture of the University of California, provisions being made by the Regents for such attendance on the farm of the college students as may be deemed best and necessary to the completion of their college courses. The University Farm and the instruction thereon shall be so conducted as to meet the needs of persons who desire instruction in agriculture, horticulture, viticulture, animal industry, dairying, irrigation, and poultry raising, and to prepare them for the pursuit thereof; and shall be used for experimental and investigational work in connection with the agricultural experiment station of the University of California. Short courses of instruction shall also be arranged for in each of the leading branches of agricultural industry, so regulated as to provide for popular attendance and general instruction in agricultural practice.”

This enactment clearly indicates that the University Farm is to be equipped and conducted so as to supplement the University courses in the agricultural

sciences now given at Berkeley, with broad and thorough instruction in agricultural policies and practices which can only be effectively administered upon an actual farm which is as widely as possible representative of the conditions under which agriculture is pursued in this State. It thus provides that theoretical instruction of regular students at the University shall be followed by such demonstrations on the farm as shall be found expedient. It also provides for distinctly different instructional work, *viz.*, short courses in the various branches of farming which will enable both young and old to devote themselves for short periods to studies of the best and most profitable ways to handle plants and animals in practical production.

Obviously it is the function of the University Farm to demonstrate specifically and definitely the advantages and availability of processes and practices which embody the teachings of the latest researches in the biological and economic sciences and to reduce to visible forms the results thereof and to demonstrate the superiority of such forms by the most practical tests of quality, of commercial suitability, and of market value. In this line of work, which must be considered as ultimate and supreme from a practical point of view, the farm will neither duplicate the instruction nor the equipment at Berkeley, but will be the complement of them essential to the attainment of a system of agricultural education which shall best serve both individual needs and the public interest. It is set forth in the Statute that the instruction at the University Farm shall be distinctly agricultural: a reference to allied subjects is followed, in the wording of the law, by an interpretation of what is to constitute such alliance, *viz.*, relation to better agriculture. Thus the instruction is projected and closed in on a clearly agricultural line. Two applications of this instruction are also clearly specified: first, to constitute a part of the course for graduation of regular students of the College of Agriculture; second, to meet the needs of all other seekers for agricultural knowledge, through short, popular courses in agricultural practice. It is the purpose of the Regents of the University to meet both these specifications as amply as possible during the coming fiscal year, as indicated in this preliminary announcement and as will be more fully set forth in a more extended publication which is now in preparation, and for which all interested are invited to make early application. It is our desire to begin correspondence at once with all who desire to participate in the instruction indicated.<sup>1</sup>

## EQUIPMENT OF THE UNIVERSITY FARM.

Immediately upon the attainment of title to the tract of land at Davisville the Regents of the University entered upon the construction of buildings and purchase of equipment so far as the balance of the appropriation remaining after payments for the land, made by the commission empowered by the statute for its selection and purchase, would provide them. Building is now in progress (June, 1907) upon a capacious creamery to furnish ample accommodation and equipment for manufacture of butter and cheese and by-products on a commercial scale, with additional rooms for lecture and laboratory instruction. There is also in construction a live-stock pavilion arranged to illustrate instruction by direct use of animals and to serve as a lecture-room for large classes in other subjects and as a general auditorium. Contracts have also been let for the building of cottages for instructors and foremen. Appropriation by the Legislature of 1907 will provide dormitory accommodations for students, barns

and sheds for stock, simple buildings for horticultural, viticultural, and other instruction, shops for farm mechanics, sheds for tools, implements, etc. Construction of such buildings will proceed as funds become available, upon the plan of providing plain and serviceable buildings, congruous in style, and with cost so adjusted to uses that they will serve as models to those contemplating buildings for similar uses. They will be practical farm buildings of pleasing aspect combining suitability for production, in the various lines which they are planned to serve, with capacity adequate to the satisfactory handling of pupils in these lines.

Animals of various kinds for breeding and production, together with tools and machinery for operation on a plan of mixed husbandry, are being selected for purchase. As much as possible of such equipment will be assembled on the farm before the beginning of the courses of instruction in which it will serve as demonstrative material. During the coming year orchards and vineyards will be planted, pastures provided, hay and feed grains grown, and arrangements made for continuous operation as a producing and instructional farm. As time goes on extensions will be undertaken until the University Farm realizes the requirements of the law creating it, *viz.*, "successfully producing the general crops of the State and as many as may be of all the crops and products successfully grown in California."

#### ANNOUNCEMENT OF SHORT COURSES.

The first offering of instruction in Agriculture on the University Farm will consist of a series of short courses calculated to meet the demand for knowledge of particular branches of California farming, and at the same time to connect these short courses so that one electing to pursue them consecutively could obtain a general insight into all of the most prominent lines of agricultural effort in this State and be aided in choosing from them the directions of his own undertakings. Intending pupils are therefore invited to enroll themselves for one or more of the courses offered. Attendance is not required except during the progress of each course which the pupil elects.

#### CALENDAR OF SHORT COURSES, 1907-08.

Dairy School.—Wednesday, October 2 to Tuesday, November 26.

Animal Industry and Veterinary Science.—Wednesday, October 30, to Tuesday, November 26.

Cereal Culture.—Wednesday, November 6, to Tuesday, November 26.

Irrigation and General Agriculture.—Tuesday, December 3, to Saturday, December 21.

Wine Making and Wine Testing.—Thursday, January 2, to Wednesday, January 8.

Grape Growing.—Thursday, January 9, to Wednesday, January 15.

Orchard Practice and Protection.—Thursday, January 16, to Wednesday, February 5.

#### INSTRUCTORS FOR SHORT COURSES.

The general plan of this short-course work will be to set forth, by lectures or informal talks, the theory of a subject and to follow with demonstration and



practice work until both the reasons for a method or process and the ability to actually perform it are mastered by the pupil. Manifestly this will require the services of many instructors, because each must be a specialist and work his own particular line. It is expected that instructors will be announced in four groups for each short course, *viz.*:

**Honorary Advisors**, who shall be selected from leading California farmers and fruit growers to attend during such period as may be convenient to them while the subject in which each of them has achieved success is under discussion. They will advise students concerning the pursuit of such branches in California, either by informal talks or through conversation, and they are expected to constitute a particular force and agency in reducing instruction to practical pertinence and value. It will be both for edification and inspiration that pupils will be brought into immediate personal contact with such men and women in each of the leading specialties of California agriculture.

**Special Lecturers**, who shall be selected from those who have given particular attention to the relations of agriculture to other occupations of men, to the economics of production, to commerce, to good citizenship, etc., and their function shall be to broaden instruction and suggest ways in which pupils can not only become better farmers but better men and women, rising to a higher conception of their duties to the state and humanity.

**Regular Lecturers**, who shall be thorough experts in the matters pertaining to each short course and experienced in giving instruction therein. They shall be selected from the faculty of the College of Agriculture of the University of California and from other institutions distinguished in agricultural instruction, for brief terms of service in which to present their special subjects. It devolves upon them to present systematic, theoretical instruction and to direct demonstrations and practice work.

**Instructors and Demonstrators** shall be selected for full knowledge of details of the best practice and understanding of the reasons involved therein, and they shall supplement the work of **Lecturers** by carrying out such systematic practical instruction as they shall prescribe.

In presenting such a broad scheme of instruction it is planned to make the Short Courses attractive and useful to youth and adults alike, to help the successful with new truth and suggestions of methods, to give those who wish to increase their efficiency and success better understanding of ways and means, and to encourage and inspire beginners with new insight and understanding. The fuller announcement of the University Farm Instruction, to which reference has been made, will indicate the persons who will perform the functions which have been outlined above.

In the exceedingly interesting educational undertaking which the University Farm provides for, the purpose of adapting instruction to California conditions will be held steadily in view. California agriculture is an epitome of the agricultural science and art of the continental United States. It is broader in scope and different in detail from that of any other State and involves a wider application of principles which are universal. With these natural advantages and with the generous appreciation of the value of education which is characteristic of the California people, there should be ultimately attained in this State a system of agricultural instruction which for soundness of pedagogic principles and applicability to breadth of agricultural needs will be unique among the educational institutions of the country.

## OUTLINES OF SHORT COURSES

### DAIRY SCHOOL.

*Wednesday, October 2, to Tuesday, November 26.*

This course is designed to meet the needs of all persons who are engaged in the various lines of dairy manufacture and desire to make themselves more familiar with the principles underlying the manufacture of milk products and the application of those principles to actual practice, to the end that they may know how to turn out an improved product. The method of instruction and the work done will apply equally to the needs of all those who are manufacturing milk products, whether it be in the ranch dairy using improved appliances, or in the large creamery or cheese factory. The advance in dairy practice has been so rapid and the intimate relation of science to dairying has been shown to be so close during the past few years, that it is difficult for the person in ordinary practice to fully understand all that has been done and the benefits it may bring him in his work. The new Dairy Building, with its equipment of modern machinery and in the hands of trained instructors, is designed to offer an easy and quick means of coming into close touch with what science is doing for the dairy industry, and to learn the *why* as well as the *how* of scientific methods of dairying.

The creamery department will be fitted up with the most modern apparatus for making butter. Centrifugal separators of the latest style and representing several types will be in daily use. The new forms of pasteurizers and cream ripeners will be used to show their value in influencing the quality of the cream. The students will do the entire work of butter-making, from receiving, weighing, and sampling the milk, to separating and ripening the cream, and churning, working, and packing the butter.

The department of cheese-making will deal particularly with making cheese of the Cheddar variety. Small vats will be used so that each student may do more of the actual work, and attend personally to the development from the time the milk enters the vat until the finished cheese is ready for market. The use of the rennet test in determining the ripeness of the milk will be shown, and the use of the "starters" in cheese-making demonstrated.

Thorough training in the use of the Babcock test in determining the per cent. of fat in all dairy products will be given.

Exceptional opportunities to become familiar with the elementary principles of dairy bacteriology will be offered students. The keeping qualities and general marketability of dairy products largely depend upon the intelligent application of bacteriological principles.

Courses in the practical operation of dairy machinery will include the following subjects: Lectures and laboratory exercises in the care and practical operation of steam boilers and engines, including the setting of slide valves, lining up of machinery, arrangement of pulleys to obtain proper speeds, different types of pumps; refrigerating machinery, practical instruction in plain soldering, packing, pipe fitting, etc.

### ANIMAL INDUSTRY AND VETERINARY SCIENCE.

*Wednesday, October 30, to Tuesday, November 26.*

The course in Animal Industry will deal with all lines of work which pertain to the judging, breeding, feeding, development and care, and management of the various breeds and classes of farm animals. Students will be given practice in judging by score cards and the official scale of points for the different breeds. Later, comparative judging will be introduced and each student required to place the animals in order of merit and give full reasons for making his awards.

The new live-stock pavilion will provide ample room for the classes in live-stock judging and students will devote a large part of their time to this work. By the time the course commences we shall have good representatives of most

of the leading breeds of horses, cattle, sheep, and swine. As it is impossible for the University to own all the animals that might be desired, arrangements are being made to secure the use of representative animals from some of our leading breeders.

The work in feeding will include a discussion of the principles of nutrition and their practical application to feeding; the relation of food to animal life for producing milk, wool, growth, or maintenance; how to compound rations, and the rearing of young stock.

In addition to the lectures and practice work given by the regular staff, it is intended to have a number of lectures by men who have made a success in animal industry work in this State. These special lectures, and the opportunity they will afford the student of discussing with such men every phase of the work, will alone be of the greatest value.

Veterinary instruction will have an important place in the curriculum. The maintenance of the general health and the control of the diseases of farm animals is of fundamental importance. A recognition of the principles and the application of the methods of veterinary science to the live-stock industry are essential to its most profitable management. The instruction will be strictly practical and well illustrated by actual surgical and medical demonstrations on clinical material.

### CEREAL CULTURE.

*Wednesday, November 6, to Tuesday, November 26.*

The lectures in this course will have to deal with the practical problems which confront the grower of cereals in California, and also a discussion of the methods employed for improving grains both as to the production per acre and quality. Demonstrations of methods, materials, and machinery will be as full as possible. In the general line of cereal growing, these will cover soils and their preparation for cereals: methods of conserving fertility in cereal culture, plowing and seeding methods, harvesting methods. There will also be lectures and demonstrations on the leading cereal plants, the methods of improvement including crossing of varieties. Special consideration will be given to the varieties of wheat, barley, oats, and corn, and their adaptations. This course should attract growers to the effort to make out clearly the present situation in cereal production and the outlook.

### IRRIGATION AND GENERAL FARMING.

*Tuesday, December 3, to Saturday, December 21.*

A fundamental feature of this course will be lectures and demonstrations of the nature and derivation of soils, with particular reference to California, and the relations thereof to plant growth and crop production.

A leading place will be given to a course in Irrigation Practice, the purpose of which will be to give a practical working knowledge of those features of irrigation engineering needed in laying out the ditches and laterals on a farm, preparing the land for the application of water, and in measuring the amount of water used. It will include methods of using leveling instruments and adjusting them when out of order, of keeping notes of the lines run, and of staking out ditches and laterals and calculating the yardage of earth to be moved and the tools used in their excavation. This will be followed by instruction in the different methods of applying water to fields in use in this State, or which may be used to advantage, and the relation of different methods of applying water to different soils, the influences which affect the amount of water lost by seepage and evaporation, and the effect of irrigation in bringing alkali to the surface. The course will conclude with an explanation of the principles which govern the flow of running water, and practical demonstrations and illustrations of the methods of measuring water. Instruction will consist of lectures and field practice.

Another feature of the General Farming Course will be lectures in beet-sugar culture which will have to deal with the practical growing of sugar beets under field conditions. The course will be specially interesting to those who



contemplate entering upon the growing of beets. It will deal with all those problems which are likely to confront the grower, especially such persons as are entering upon the production of this crop for the first time. Notwithstanding this course is planned for those who are to engage in the production of beets for the manufacture of sugar, yet it will be of interest to those who are desirous of growing beets or other roots for purposes of cattle food.

Other subjects, including general farm policies and methods, the construction, operation, and efficiency tests of farm implements and machines, will be provided for. The principles and practices of fertilization and the operation of the California fertilizer control law will also be set forth.

There will also be lectures upon farm life; the relations of the farmer to those pursuing other vocations; the scope and function of farmers' organizations; the place of the farmer in public affairs; recent developments in agricultural education; and other broad and inspiring lines of contemplation and discussion.

### WINE MAKING AND WINE TESTING.

*Thursday, January 2, to Wednesday, January 8.*

This course is intended for wine-makers who already know something of the ordinary practice in California and desire to perfect themselves in their art. It will be confined exclusively to the manufacture of dry wine, the time being too short to touch on sweet wines and the various subsidiary industries connected with wine-making.

The subjects which will be given especial attention in the lectures are the economical utilization and amelioration of grapes, the control of fermentation by means of pure yeast, cooling machines and sulfites, and the various operations of defection, racking, pasteurization, filtering, and fining used in the completion and aging of wines.

The laboratory course is designed to give cellar men the knowledge of those chemical and physical tests which are necessary for the production and proper handling of wine, and will consist in practical determinations of alcohol, solid contents, sugar, acid, and color in wines.

There will be ten lectures, two each day, on the above topics, and the remainder of the time will be devoted to laboratory work.

### GRAPE GROWING.

*Thursday, January 9, to Wednesday, January 15.*

This course will consist of a short outline of the main operations concerned in the planting and growing of grapes in California; especial emphasis being given to the modern developments of the art and to those things in which ordinary Californian practice is defective. It is intended to be useful to those who have had little or no experience in viticulture and to those more experienced growers who wish to learn something of improved methods. Particular attention will be given to the proper preparation of the land for planting, the handling of resistant vines, and the various types of pruning suitable for our principal wine, raisin, and table grapes.

The course will consist of ten lectures, two each day, on planting, pruning, grafting, fertilization, sulfuring, and some special topics concerning raisins and table grapes. The rest of the time will be devoted to practical exercises in grafting, pruning, and tests of sulfuring methods.

### ORCHARD PRACTICE AND PROTECTION.

*Thursday, January 16, to Wednesday, February 5.*

The design of this course is to demonstrate and explain the methods by which the best form, thrift, and productiveness of various fruit trees are secured in California. It will proceed from the propagation of the tree in nursery practice to the planting in orchard, the subsequent training of the young tree and

its handling after attaining bearing age, involving, of course, pruning, cultivation, the growth of cover crops, and other matters involved in orchard practice and policy. There will also be discussions of the requirements of different fruits and how they are met by California conditions, their economic importance and commercial outlook, and the best methods of rendering them suitable for the world's trade. The place of fruit growing in schemes of mixed farming practicable and profitable in California will also be suggestively considered. The course will, in a word, be planned to afford all inquirers after knowledge in fruit-growing activities and investments such insight and understanding as they desire. Some features of the work will be rendered directly practical through the laying out and planting of the University Farm orchards during the progress of the course. There will be a number of qualified instructors in the various phases of the industry.

Instruction in Orchard Protection will be provided by full discussions and demonstrations of the various injurious insects affecting California fruits, methods of checking their ravages, and materials and appliances used in California insect warfare. Similar treatment will be given to plant diseases, embracing the various mildews, blights, etc., with which fruit-growers have to contend. This course will also be made practical by the examination and use of insecticides and fungicides, and the machinery employed for their application in the orchard.

#### REQUIREMENTS OF PUPILS IN SHORT COURSES.

There will be no charge for tuition, but the pupil will be required to deposit a small fee to cover cost of material used in laboratory or practice work. Pupils will also be expected to provide themselves with a few text-books if these are required by instructors. Pupils will also arrange for their own board and lodging in the town of Davisville or elsewhere, as they see fit. Information will be given at the farm as to location and cost of accommodations which are available. Although the construction of dormitory and boarding halls will proceed as rapidly as possible, they can hardly be expected to be in readiness for this year's pupils.

There is no restriction as to age or sex of short-course pupils and no absolute educational qualification for enrollment. It is expected, however, that pupils will be mature enough to cherish a definite purpose and proficient enough in common branches of knowledge to understand instruction and to make such records of work as the instructors may require.

#### LONGER COURSES ON THE UNIVERSITY FARM.

It is expected that more systematic instruction covering longer periods of time will be speedily provided both for regular students in the College of Agriculture and for others. Students will also be required to do actual farm work at least to the extent of demonstrating their efficiency in it, and student labor will be employed as far as practicable in all the farming operations, thus reducing cost of maintenance to those who desire to partially provide for themselves in this way. Announcement of opportunity for residence and instruction on the farm for stated periods will be made later.

All persons desiring further information by correspondence may address: Dean of the College of Agriculture, University of California, Berkeley.